

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully request.

Claims 1-3, 8, 9, and 11-18 are presently active in this case. Claims 1-3, 8, and 11-13 have been amended and claims 14-18 have been added by the present amendment.

In the outstanding office action, claim 3, 12, and 13 were objected to because the units of impedance were indicated as being incorrect; claim 8 was rejected under 35 USC 102(b) as being anticipated by U.S. patent number 5,295,487 to Saitoh et al.; and claims 1-3, 12, and 13 were rejected under 35 USC 103(a) as being unpatentable over U.S. patent number 6,049,159 to Barthe et al. in view of U.S. patent number 6,308,389 to Tezuka.

Claim 9 was objected to as being dependent upon a rejected base claim, but was indicated as being allowable if rewritten in independent form. Applicants acknowledge with appreciation the indication of allowable subject matter. However, applicants believe that they are entitled to the scope of protection provided by claim 8. Consequently, claim 9 has been maintained in dependant form.

Claim 11 has been indicated as being allowable, applicants acknowledge with appreciation the indication of allowability.

Applicants acknowledge that the indication of allowability regarding claim 3 has been withdrawn.

Regarding the objection to claims 3, 12, and, 13, Applicants have amended those claims to correctly identify the units for acoustical impedance. No further objection on this basis is therefore anticipated.

Claim 8 stands rejected under 35 U.S.C. 102(b) as being anticipated by Saitoh et al. Applicants respectfully traverse. Applicants point out with regard to their invention that in order to protect a piezoelectric member and prevent the occurrence of chipping when the

piezoelectric member is cut, the invention defined by claim 8 includes a first flexible printed wiring board which is arranged between first electrodes and a backing member. The flexible printed wire board includes a plurality of first pattern wires each having a width smaller than a width of each of the piezoelectric member in a longitudinal direction of the ultrasonic probe, extend in a longitudinal direction of each of the piezoelectric members, connect to the first electrode along the longitudinal direction of each of the piezoelectric members, and connects the plurality of pattern wires to an ultrasonic diagnosis apparatus body. In contradistinction thereto, Saitoh et al. provide, for example, that a part of the flexible print cable (FPC) is provided below the end portion of the electrode. See, for example, FIG. 2 and column 10, lines 8-15 of Saitoh et al.

Moreover, as a consequence of the structure defined by claim 8, no place of discontinuous bonding exists on the bonding surface of the piezoelectric members and the FPC. Therefore, the entire surface of the piezoelectric members is sufficiently protected. Consequently, chipping of the piezoelectric member during the cutting step can be prevented.

On the other hand, in Saitoh et al., because part of the FPC is provided below the end portion of the electrode, an interface of the bonding surface and the non-bonding surface (i.e. the place of discontinuous bonding) exists on the bonding surface of the FPC and the electrode. Thus, chipping of the piezoelectric member, etc. may easily occur.

For the foregoing reasons, Saitoh et al. are not believed to anticipate the subject matter defined by claim 8 and the rejection of claim 8 under 35 U.S.C. 102(b) as being anticipated by Saitoh et al. should be withdrawn.

Claims 1, 2, 12, and 13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Barthe et al. in view of Tezuka. Applicants respectfully traverse. Applicants point out with regard to the invention defined by claim 1 that, to protect the piezoelectric member and prevent the occurrence of chipping when, for example, the piezoelectric is cut, the invention

of claim 1 defines a lower resin layer which is formed on a lower surface of the piezoelectric member and which has smaller acoustic impedance than the piezoelectric member, an excellent cutting characteristic, excellent conductivity, and functions as an electrode.

On the other hand, neither Barthe et al. nor Tezuka aims to prevent occurrence of chipping when the piezoelectric member is cut or includes “a lower resin layer” as defined by claims 1, 2, 12 and 13 of the present application.

Moreover, a non-evident advantage that cannot be achieved from the patents of record can be achieved from the inventions defined by claims 1, 2, 12 and 13 having the above-explained structure. That is, in the present invention, “a lower resin layer” protects the piezoelectric members during cutting and, therefore, occurrence of the chipping of the piezoelectric member during the cutting step can be prevented.


For the foregoing reasons, Barthe et al. are not believed to anticipate the subject matter defined by claims 1, 2, 12, and 13 when considered alone or in combination with Tezuka and the rejection of claims 1, 2, 12, and 13 under 35 U.S.C. 103(a) as being rendered unpatentable in view of the aforementioned combination should be withdrawn.

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Reply to Office Action of July 27, 2004

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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